GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: February 14, 2005, 15:17:38 ; Search time 43 Seconds
(without alignments)
1131.888 Million cell updates/sec

Title: US-10-614-076-98
Perfect score: 3406
Sequence: 1 MNPNNRSEHDTIKVTPNSEL.....SFVSNEKIYIDKIEFIPVQL 652

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 150 summaries

Database : Issued_Patents_AA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	3406	100.0	652	3	US-08-996-441B-98	Sequence 98, Appl
2	3406	100.0	652	3	US-08-996-441B-111	Sequence 111, App
3	3406	100.0	652	3	US-08-993-722A-98	Sequence 98, Appl
4	3406	100.0	652	3	US-08-993-722A-111	Sequence 111, App
5	3406	100.0	652	3	US-08-993-170A-98	Sequence 98, Appl
6	3406	100.0	652	3	US-08-993-170A-111	Sequence 111, App
7	3406	100.0	652	3	US-08-993-775B-98	Sequence 98, Appl
8	3406	100.0	652	3	US-08-993-775B-111	Sequence 111, App
9	3406	100.0	652	4	US-09-377-466B-2	Sequence 2, Appli
10	3406	100.0	652	4	US-09-427-770-98	Sequence 98, Appl
11	3406	100.0	652	4	US-09-427-770-111	Sequence 111, App
12	3406	100.0	652	4	US-09-427-769-98	Sequence 98, Appl
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15	3406	100.0	652	6	5187091-2	Patent No. 5187091
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ALIGNMENTS

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RESULT 1
US-08-996-441B-98
; Sequence 98, Application US/08996441B
; Patent No. 6023013
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  INSECT-RESISTANT TRANSGENIC PLANTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,441B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  800
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:151
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  98:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-441B-98

  Query Match           100.0%;  Score 3406;  DB 3;  Length 652;
  Best Local Similarity  100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
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Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
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Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
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Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
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RESULT 2
US-08-996-441B-111
; Sequence 111, Application US/08996441B
; Patent No. 6023013
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  INSECT-RESISTANT TRANSGENIC PLANTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,441B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  800
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:151
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  111:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
US-08-996-441B-111

  Query Match             100.0%;  Score 3406;  DB 3;  Length 652;
  Best Local Similarity   100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

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Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
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Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
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Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
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Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 3
US-08-993-722A-98
; Sequence 98, Application US/08993722A
; Patent No. 6060594
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,722A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  98:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
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;    MOLECULE TYPE:  protein
US-08-993-722A-98

  Query Match             100.0%;  Score 3406;  DB 3;  Length 652;
  Best Local Similarity   100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 4
US-08-993-722A-111
; Sequence 111, Application US/08993722A
; Patent No. 6060594
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,722A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  111:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
US-08-993-722A-111

  Query Match             100.0%;  Score 3406;  DB 3;  Length 652;
  Best Local Similarity   100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
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Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 5
US-08-993-170A-98
; Sequence 98, Application US/08993170A
; Patent No. 6063597
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  POLYPEPTIDE COMPOSITIONS TOXIC TO
;    TITLE OF INVENTION:  COLEOPTERAN INSECTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,170A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  98:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-170A-98

  Query Match           100.0%;  Score 3406;  DB 3;  Length 652;
  Best Local Similarity  100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 6
US-08-993-170A-111
; Sequence 111, Application US/08993170A
; Patent No. 6063597
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  POLYPEPTIDE COMPOSITIONS TOXIC TO
;    TITLE OF INVENTION:  COLEOPTERAN INSECTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,170A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  111:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
US-08-993-170A-111
```

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  Query Match             100.0%;  Score 3406;  DB 3;  Length 652;
  Best Local Similarity   100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 7
US-08-993-775B-98
; Sequence 98, Application US/08993775B
; Patent No. 6077824
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  METHODS FOR IMPROVING THE ACTIVITY OF
;    TITLE OF INVENTION:  DELTA-ENDOTOXINS AGAINST INSECT PESTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,775B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:150
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  98:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-775B-98

  Query Match             100.0%;  Score 3406;  DB 3;  Length 652;
  Best Local Similarity   100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 8
```

```
US-08-993-775B-111
; Sequence 111, Application US/08993775B
; Patent No. 6077824
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  METHODS FOR IMPROVING THE ACTIVITY OF
;    TITLE OF INVENTION:  DELTA-ENDOTOXINS AGAINST INSECT PESTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,775B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:150
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  111:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
US-08-993-775B-111

  Query Match           100.0%;  Score 3406;  DB 3;  Length 652;
  Best Local Similarity   100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 9
US-09-377-466B-2
; Sequence 2, Application US/09377466B
; Patent No. 6501009
; GENERAL INFORMATION:
;  APPLICANT: Romano, Charles P.
;  TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants
;  FILE REFERENCE: 38-21(15304) Cry3Bb Improved Exp. Corn
;  CURRENT APPLICATION NUMBER: US/09/377,466B
;  CURRENT FILING DATE:  1999-08-19
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
;   LENGTH: 652
;   TYPE: PRT
;   ORGANISM: Bacillus thuringiensis
US-09-377-466B-2

  Query Match           100.0%;  Score 3406;  DB 4;  Length 652;
  Best Local Similarity   100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
                ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 10
US-09-427-770-98
; Sequence 98, Application US/09427770
; Patent No. 6620988
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,770
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/993,722
;      FILING DATE:  18-DEC-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  98:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-770-98

  Query Match             100.0%;  Score 3406;  DB 4;  Length 652;
  Best Local Similarity   100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 11
US-09-427-770-111
; Sequence 111, Application US/09427770
; Patent No. 6620988
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
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;       APPLICATION NUMBER:  US/09/427,770
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/993,722
;       FILING DATE:  18-DEC-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Kitchell, Barbara S.
;       REGISTRATION NUMBER:  33,928
;       REFERENCE/DOCKET NUMBER:  MECO:149
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  512/418-3106
;       TELEFAX:  512/474-7577
;   INFORMATION FOR SEQ ID NO:  111:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  652 amino acids
;       TYPE:  amino acid
;       STRANDEDNESS:
;       TOPOLOGY:  linear
US-09-427-770-111

  Query Match           100.0%;  Score 3406;  DB 4;  Length 652;
  Best Local Similarity  100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 12
US-09-427-769-98
; Sequence 98, Application US/09427769
; Patent No. 6642030
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,769
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/993,722
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  98:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-769-98

  Query Match           100.0%;  Score 3406;  DB 4;  Length 652;
  Best Local Similarity  100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
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                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
                 ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 13
US-09-427-769-111
; Sequence 111, Application US/09427769
; Patent No. 6642030
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,769
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/993,722
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  111:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:
;      TOPOLOGY:  linear
;
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US-09-427-769-111

  Query Match           100.0%;  Score 3406;  DB 4;  Length 652;
  Best Local Similarity  100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 14
5187091-2
;Patent No. 5187091
;    APPLICANT: DONOVAN, WILLIAM P.;RUPAR, MARK J.;SLANEY,
;ANNETTE C.;JOHNSON, TIMOTHY B.
;    TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYIIIC GENE
;. ENCODING TOXIC TO COLEOPTERAN INSECTS
;    NUMBER OF SEQUENCES: 2
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/496,568
;      FILING DATE: 20-MAR-1990
;SEQ ID NO:2:
;      LENGTH: 652
5187091-2

  Query Match           100.0%;  Score 3406;  DB 6;  Length 652;
  Best Local Similarity  100.0%;  Pred. No. 6e-287;
  Matches  652;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
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Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
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RESULT 15
5187091-2
;Patent No. 5187091
; APPLICANT: DONOVAN, WILLIAM P.;RUPAR, MARK J.;SLANEY,
;ANNETTE C.;JOHNSON, TIMOTHY B.
; TITLE OF INVENTION: BACILLUS THURINGIENSIS CRYIIIC GENE
;. ENCODING TOXIC TO COLEOPTERAN INSECTS
; NUMBER OF SEQUENCES: 2
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/496,568
; FILING DATE: 20-MAR-1990
;SEQ ID NO:2:
; LENGTH: 652
5187091-2

Query Match 100.0%; Score 3406; DB 6; Length 652;
Best Local Similarity 100.0%; Pred. No. 6e-287;
Matches 652; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
```

RESULT 16
US-08-996-441B-68
; Sequence 68, Application US/08996441B
; Patent No. 6023013
; GENERAL INFORMATION:
; APPLICANT: English, Leigh H.
; APPLICANT: Brussock, Susan M.
; APPLICANT: Malvar, Thomas M.
; APPLICANT: Bryson, James W.
; APPLICANT: Kulesza, Caroline A.
; APPLICANT: Walters, Frederick S.
; APPLICANT: Slatin, Stephen L.
; APPLICANT: Von Tersch, Michael A.
; APPLICANT: Romano, Charles
; TITLE OF INVENTION: INSECT-RESISTANT TRANSGENIC PLANTS
; NUMBER OF SEQUENCES: 113
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Arnold, White & Durkee
; STREET: P.O. Box 4433
; CITY: Houston
; STATE: Texas
; COUNTRY: USA
; ZIP: 77210
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/996,441B
; FILING DATE: 18-DEC-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Kitchell, Barbara S.
; REGISTRATION NUMBER: 33,928
; REFERENCE/DOCKET NUMBER: MECO:151
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 512/418-3000
; TELEFAX: 512/474-7577
; INFORMATION FOR SEQ ID NO: 68:

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;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-441B-68

  Query Match             99.9%;  Score 3402;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.3e-286;
  Matches  651;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||:|||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLRPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 17
US-08-993-722A-68
; Sequence 68, Application US/08993722A
; Patent No. 6060594
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,722A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  68:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-722A-68

  Query Match             99.9%;  Score 3402;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.3e-286;
  Matches  651;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||:|||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLRPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 18
US-08-993-170A-68
; Sequence 68, Application US/08993170A
; Patent No. 6063597
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  POLYPEPTIDE COMPOSITIONS TOXIC TO
;    TITLE OF INVENTION:  COLEOPTERAN INSECTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,170A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  68:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-170A-68

  Query Match             99.9%;  Score 3402;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.3e-286;
  Matches  651;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||:||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLRPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 19
US-08-993-775B-68
; Sequence 68, Application US/08993775B
; Patent No. 6077824
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  METHODS FOR IMPROVING THE ACTIVITY OF
;    TITLE OF INVENTION:  DELTA-ENDOTOXINS AGAINST INSECT PESTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,775B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:150
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  68:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
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```
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-775B-68

  Query Match             99.9%;  Score 3402;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.3e-286;
  Matches  651;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||:||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLRPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 20
US-09-427-770-68
; Sequence 68, Application US/09427770
; Patent No. 6620988
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,770
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/993,722
;      FILING DATE:  18-DEC-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  68:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-770-68

  Query Match             99.9%;  Score 3402;  DB 4;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.3e-286;
  Matches  651;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||:||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLRPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 21
US-09-427-769-68
; Sequence 68, Application US/09427769
; Patent No. 6642030
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,769
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/993,722
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  68:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-769-68

  Query Match             99.9%;  Score 3402;  DB 4;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.3e-286;
  Matches  651;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||:|||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLRPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 22
US-08-996-441B-14
; Sequence 14, Application US/08996441B
; Patent No. 6023013
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  INSECT-RESISTANT TRANSGENIC PLANTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,441B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  800
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:151
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
```

```
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-441B-14

  Query Match             99.9%;  Score 3401;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.6e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||| ||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDINLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 23
US-08-993-722A-14
; Sequence 14, Application US/08993722A
; Patent No. 6060594
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,722A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-722A-14

  Query Match             99.9%;  Score 3401;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.6e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||| ||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDINLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
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              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 24
US-08-993-170A-14
; Sequence 14, Application US/08993170A
; Patent No. 6063597
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  POLYPEPTIDE COMPOSITIONS TOXIC TO
;    TITLE OF INVENTION:  COLEOPTERAN INSECTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,170A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-170A-14

  Query Match             99.9%;  Score 3401;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.6e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||| ||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDINLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 25
US-08-993-775B-14
; Sequence 14, Application US/08993775B
; Patent No. 6077824
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  METHODS FOR IMPROVING THE ACTIVITY OF
;    TITLE OF INVENTION:  DELTA-ENDOTOXINS AGAINST INSECT PESTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,775B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:150
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
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```
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-775B-14

  Query Match             99.9%;  Score 3401;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.6e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDINLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 26
US-09-377-466B-6
; Sequence 6, Application US/09377466B
; Patent No. 6501009
; GENERAL INFORMATION:
;  APPLICANT: Romano, Charles P.
;  TITLE OF INVENTION: Improved Expression of Cry3Bb Insecticidal Protein in Plants
;  FILE REFERENCE: 38-21(15304) Cry3Bb Improved Exp. Corn
;  CURRENT APPLICATION NUMBER: US/09/377,466B
;  CURRENT FILING DATE:  1999-08-19
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 6
;   LENGTH: 652
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: synthetic or
;   OTHER INFORMATION: non-naturally occurring amino acid sequence encoded by SEQ ID NO:

;   NAME/KEY: PRT
;   LOCATION: (1)..(652)
US-09-377-466B-6

  Query Match             99.9%;  Score 3401;  DB 4;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.6e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||| ||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYNTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 27
US-09-427-770-14
; Sequence 14, Application US/09427770
; Patent No. 6620988
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
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```
;       CITY:  Houston
;       STATE:  Texas
;       COUNTRY:  USA
;       ZIP:  77210
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/09/427,770
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/993,722
;       FILING DATE:  18-DEC-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Kitchell, Barbara S.
;       REGISTRATION NUMBER:  33,928
;       REFERENCE/DOCKET NUMBER:  MECO:149
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  512/418-3106
;       TELEFAX:  512/474-7577
;   INFORMATION FOR SEQ ID NO:  14:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  652 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
US-09-427-770-14

  Query Match             99.9%;  Score 3401;  DB 4;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.6e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDINLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 28
US-09-427-769-14
; Sequence 14, Application US/09427769
; Patent No. 6642030
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,769
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/993,722
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-769-14

  Query Match             99.9%;  Score 3401;  DB 4;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 1.6e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
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Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              |||||||||||||||||||||||||||||||||||||||||||||||||| ||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDINLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
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RESULT 29
US-08-996-441B-32
; Sequence 32, Application US/08996441B
; Patent No. 6023013
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  INSECT-RESISTANT TRANSGENIC PLANTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,441B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  800
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:151
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
```

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;  INFORMATION FOR SEQ ID NO:  32:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-441B-32

  Query Match             99.8%;  Score 3400;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFILNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
```

```
RESULT 30
US-08-996-441B-48
; Sequence 48, Application US/08996441B
; Patent No. 6023013
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  INSECT-RESISTANT TRANSGENIC PLANTS
;    NUMBER OF SEQUENCES:  113
```

```
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,441B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  800
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:151
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  48:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-441B-48

  Query Match             99.8%;  Score 3400;  DB 3;  Length 652;
  Best Local Similarity   99.7%;  Pred. No. 2e-286;
  Matches  650;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||:||| |||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDVRLYPKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 31
US-08-993-722A-32
; Sequence 32, Application US/08993722A
; Patent No. 6060594
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,722A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  32:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-722A-32

  Query Match             99.8%;  Score 3400;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFILNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 32
US-08-993-722A-48
; Sequence 48, Application US/08993722A
; Patent No. 6060594
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,722A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  48:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-722A-48

  Query Match            99.8%;  Score 3400;  DB 3;  Length 652;
  Best Local Similarity  99.7%;  Pred. No. 2e-286;
  Matches  650;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||:||| |||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDVRLYPKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 33
US-08-993-170A-32
; Sequence 32, Application US/08993170A
; Patent No. 6063597
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  POLYPEPTIDE COMPOSITIONS TOXIC TO
;    TITLE OF INVENTION:  COLEOPTERAN INSECTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
```

```
;       STREET:  P.O. Box 4433
;       CITY:  Houston
;       STATE:  Texas
;       COUNTRY:  USA
;       ZIP:  77210
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/993,170A
;       FILING DATE:  18-DEC-1997
;       CLASSIFICATION:  424
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Kitchell, Barbara S.
;       REGISTRATION NUMBER:  33,928
;       REFERENCE/DOCKET NUMBER:  MECO:002
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  512/418-3000
;       TELEFAX:  512/474-7577
;   INFORMATION FOR SEQ ID NO:  32:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  652 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
US-08-993-170A-32

  Query Match             99.8%;  Score 3400;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFILNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 34
US-08-993-170A-48
; Sequence 48, Application US/08993170A
; Patent No. 6063597
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  POLYPEPTIDE COMPOSITIONS TOXIC TO
;    TITLE OF INVENTION:  COLEOPTERAN INSECTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,170A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  48:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-170A-48

  Query Match             99.8%;  Score 3400;  DB 3;  Length 652;
  Best Local Similarity   99.7%;  Pred. No. 2e-286;
  Matches  650;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
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                ||||||||||||||||||||||||||||||||||||||||||||||||||:||| |||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDVRLYPKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
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RESULT 35
US-08-993-775B-32
; Sequence 32, Application US/08993775B
; Patent No. 6077824
; GENERAL INFORMATION:
; APPLICANT: English, Leigh H.
; APPLICANT: Brussock, Susan M.
; APPLICANT: Malvar, Thomas M.
; APPLICANT: Bryson, James W.
; APPLICANT: Kulesza, Caroline A.
; APPLICANT: Walters, Frederick S.
; APPLICANT: Slatin, Stephen L.
; APPLICANT: Von Tersch, Michael A.
; TITLE OF INVENTION: METHODS FOR IMPROVING THE ACTIVITY OF
; TITLE OF INVENTION: DELTA-ENDOTOXINS AGAINST INSECT PESTS
; NUMBER OF SEQUENCES: 113
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Arnold, White & Durkee
; STREET: P.O. Box 4433
; CITY: Houston
; STATE: Texas
; COUNTRY: USA
; ZIP: 77210
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/993,775B
; FILING DATE: 18-DEC-1997
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Kitchell, Barbara S.
; REGISTRATION NUMBER: 33,928
; REFERENCE/DOCKET NUMBER: MECO:150
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 512/418-3000
; TELEFAX: 512/474-7577
; INFORMATION FOR SEQ ID NO: 32:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 652 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein

US-08-993-775B-32

Query Match 99.8%; Score 3400; DB 3; Length 652;
Best Local Similarity 99.8%; Pred. No. 2e-286;
Matches 651; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFILNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
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RESULT 36
US-08-993-775B-48
; Sequence 48, Application US/08993775B
; Patent No. 6077824
; GENERAL INFORMATION:
; APPLICANT: English, Leigh H.
; APPLICANT: Brussock, Susan M.
; APPLICANT: Malvar, Thomas M.
; APPLICANT: Bryson, James W.
; APPLICANT: Kulesza, Caroline A.
; APPLICANT: Walters, Frederick S.
; APPLICANT: Slatin, Stephen L.
; APPLICANT: Von Tersch, Michael A.
; TITLE OF INVENTION: METHODS FOR IMPROVING THE ACTIVITY OF
; TITLE OF INVENTION: DELTA-ENDOTOXINS AGAINST INSECT PESTS
; NUMBER OF SEQUENCES: 113
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Arnold, White & Durkee
; STREET: P.O. Box 4433
; CITY: Houston
; STATE: Texas
; COUNTRY: USA

```
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,775B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  514
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:150
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  48:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-775B-48

  Query Match             99.8%;  Score 3400;  DB 3;  Length 652;
  Best Local Similarity   99.7%;  Pred. No. 2e-286;
  Matches  650;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||:||| |||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDVRLYPKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
```

```
RESULT 37
US-09-427-770-32
; Sequence 32, Application US/09427770
; Patent No. 6620988
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,770
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/993,722
;      FILING DATE:  18-DEC-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  32:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-770-32

  Query Match             99.8%;  Score 3400;  DB 4;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
                |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFILNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
                ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 38
US-09-427-770-48
; Sequence 48, Application US/09427770
; Patent No. 6620988
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,770
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/993,722
;      FILING DATE:  18-DEC-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  48:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-770-48

  Query Match             99.8%;  Score 3400;  DB 4;  Length 652;
  Best Local Similarity   99.7%;  Pred. No. 2e-286;
  Matches  650;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||:||| |||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDVRLYPKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 39
US-09-427-769-32
; Sequence 32, Application US/09427769
; Patent No. 6642030
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
```

```
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,769
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/993,722
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  32:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-769-32

  Query Match           99.8%;  Score 3400;  DB 4;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              |||||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFILNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 40
US-09-427-769-48
; Sequence 48, Application US/09427769
; Patent No. 6642030
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,769
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/993,722
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  48:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-769-48

  Query Match           99.8%;  Score 3400;  DB 4;  Length 652;
  Best Local Similarity   99.7%;  Pred. No. 2e-286;
  Matches  650;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
                ||||||||||||||||||||||||||||||||||||||||||||||||:||| |||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDVRLYPKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
                ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 41
US-08-996-441B-44
; Sequence 44, Application US/08996441B
; Patent No. 6023013
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  INSECT-RESISTANT TRANSGENIC PLANTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,441B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  800
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:151
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  44:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-441B-44

  Query Match             99.8%;  Score 3399;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2.4e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              |||||||||||||||||||||||||||||||||||||||| ||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQGRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 42
US-08-996-441B-54
; Sequence 54, Application US/08996441B
; Patent No. 6023013
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
```

```
;    TITLE OF INVENTION:  INSECT-RESISTANT TRANSGENIC PLANTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,441B
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  800
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:151
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  54:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-441B-54

  Query Match            99.8%;  Score 3399;  DB 3;  Length 652;
  Best Local Similarity  99.8%;  Pred. No. 2.4e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              |||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSGFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 43
US-08-993-722A-44
; Sequence 44, Application US/08993722A
; Patent No. 6060594
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,722A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  44:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-722A-44

  Query Match            99.8%;  Score 3399;  DB 3;  Length 652;
  Best Local Similarity  99.8%;  Pred. No. 2.4e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              |||||||||||||||||||||||||||||||||||||||||||||| ||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQGRIRELFSQAESHFRN 180
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Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
```

RESULT 44
US-08-993-722A-54
; Sequence 54, Application US/08993722A
; Patent No. 6060594
; GENERAL INFORMATION:
; APPLICANT: English, Leigh H.
; APPLICANT: Brussock, Susan M.
; APPLICANT: Malvar, Thomas M.
; APPLICANT: Bryson, James W.
; APPLICANT: Kulesza, Caroline A.
; APPLICANT: Walters, Frederick S.
; APPLICANT: Slatin, Stephen L.
; APPLICANT: Von Tersch, Michael A.
; APPLICANT: Romano, Charles
; TITLE OF INVENTION: NUCLEIC ACID SEGMENTS ENCODING MODIFIED
; TITLE OF INVENTION: COLEOPTERAN-TOXIC CRYSTAL PROTEINS
; NUMBER OF SEQUENCES: 113
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Arnold, White & Durkee
; STREET: P.O. Box 4433
; CITY: Houston
; STATE: Texas
; COUNTRY: USA
; ZIP: 77210
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/993,722A
; FILING DATE: 18-DEC-1997
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Kitchell, Barbara S.
; REGISTRATION NUMBER: 33,928
; REFERENCE/DOCKET NUMBER: MECO:149
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 512/418-3106
; TELEFAX: 512/474-7577

; INFORMATION FOR SEQ ID NO: 54:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 652 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-993-722A-54

Query Match 99.8%; Score 3399; DB 3; Length 652;
Best Local Similarity 99.8%; Pred. No. 2.4e-286;
Matches 651; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              |||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSGFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
```

RESULT 45
US-08-993-170A-44
; Sequence 44, Application US/08993170A
; Patent No. 6063597
; GENERAL INFORMATION:
; APPLICANT: English, Leigh H.
; APPLICANT: Brussock, Susan M.
; APPLICANT: Malvar, Thomas M.
; APPLICANT: Bryson, James W.
; APPLICANT: Kulesza, Caroline A.
; APPLICANT: Walters, Frederick S.
; APPLICANT: Slatin, Stephen L.
; APPLICANT: Von Tersch, Michael A.
; TITLE OF INVENTION: POLYPEPTIDE COMPOSITIONS TOXIC TO
; TITLE OF INVENTION: COLEOPTERAN INSECTS
; NUMBER OF SEQUENCES: 113

```
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,170A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  44:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-170A-44

  Query Match             99.8%;  Score 3399;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2.4e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              |||||||||||||||||||||||||||||||||||||||| ||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQGRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 46
US-08-993-170A-54
; Sequence 54, Application US/08993170A
; Patent No. 6063597
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    TITLE OF INVENTION:  POLYPEPTIDE COMPOSITIONS TOXIC TO
;    TITLE OF INVENTION:  COLEOPTERAN INSECTS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/993,170A
;      FILING DATE:  18-DEC-1997
;      CLASSIFICATION:  424
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:002
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3000
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  54:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-993-170A-54

  Query Match             99.8%;  Score 3399;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2.4e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              |||||||| |||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSGFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
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Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
```

RESULT 47
US-08-993-775B-44
; Sequence 44, Application US/08993775B
; Patent No. 6077824
; GENERAL INFORMATION:
; APPLICANT: English, Leigh H.
; APPLICANT: Brussock, Susan M.
; APPLICANT: Malvar, Thomas M.
; APPLICANT: Bryson, James W.
; APPLICANT: Kulesza, Caroline A.
; APPLICANT: Walters, Frederick S.
; APPLICANT: Slatin, Stephen L.
; APPLICANT: Von Tersch, Michael A.
; TITLE OF INVENTION: METHODS FOR IMPROVING THE ACTIVITY OF
; TITLE OF INVENTION: DELTA-ENDOTOXINS AGAINST INSECT PESTS
; NUMBER OF SEQUENCES: 113
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Arnold, White & Durkee
; STREET: P.O. Box 4433
; CITY: Houston
; STATE: Texas
; COUNTRY: USA
; ZIP: 77210
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/993,775B
; FILING DATE: 18-DEC-1997
; CLASSIFICATION: 514
; ATTORNEY/AGENT INFORMATION:
; NAME: Kitchell, Barbara S.
; REGISTRATION NUMBER: 33,928
; REFERENCE/DOCKET NUMBER: MECO:150
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 512/418-3000
; TELEFAX: 512/474-7577
; INFORMATION FOR SEQ ID NO: 44:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 652 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-993-775B-44

Query Match 99.8%; Score 3399; DB 3; Length 652;
Best Local Similarity 99.8%; Pred. No. 2.4e-286;
Matches 651; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              |||||||||||||||||||||||||||||||||||||||| ||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQGRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
```

RESULT 48
US-08-993-775B-54
; Sequence 54, Application US/08993775B
; Patent No. 6077824
; GENERAL INFORMATION:
; APPLICANT: English, Leigh H.
; APPLICANT: Brussock, Susan M.
; APPLICANT: Malvar, Thomas M.
; APPLICANT: Bryson, James W.
; APPLICANT: Kulesza, Caroline A.
; APPLICANT: Walters, Frederick S.
; APPLICANT: Slatin, Stephen L.
; APPLICANT: Von Tersch, Michael A.
; TITLE OF INVENTION: METHODS FOR IMPROVING THE ACTIVITY OF
; TITLE OF INVENTION: DELTA-ENDOTOXINS AGAINST INSECT PESTS
; NUMBER OF SEQUENCES: 113
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Arnold, White & Durkee
; STREET: P.O. Box 4433
; CITY: Houston

```
;       STATE:  Texas
;       COUNTRY:  USA
;       ZIP:  77210
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/993,775B
;       FILING DATE:  18-DEC-1997
;       CLASSIFICATION:  514
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Kitchell, Barbara S.
;       REGISTRATION NUMBER:  33,928
;       REFERENCE/DOCKET NUMBER:  MECO:150
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  512/418-3000
;       TELEFAX:  512/474-7577
;   INFORMATION FOR SEQ ID NO:  54:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  652 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
US-08-993-775B-54

  Query Match             99.8%;  Score 3399;  DB 3;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2.4e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
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Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
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Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              |||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSGFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 49
US-09-427-770-44
; Sequence 44, Application US/09427770
; Patent No. 6620988
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,770
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/993,722
;      FILING DATE:  18-DEC-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
;  INFORMATION FOR SEQ ID NO:  44:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-770-44

  Query Match             99.8%;  Score 3399;  DB 4;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2.4e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              |||||||||||||||||||||||||||||||||||||||||||||||||| ||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQGRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
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Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


RESULT 50
US-09-427-770-54
; Sequence 54, Application US/09427770
; Patent No. 6620988
;  GENERAL INFORMATION:
;    APPLICANT:  English, Leigh H.
;    APPLICANT:  Brussock, Susan M.
;    APPLICANT:  Malvar, Thomas M.
;    APPLICANT:  Bryson, James W.
;    APPLICANT:  Kulesza, Caroline A.
;    APPLICANT:  Walters, Frederick S.
;    APPLICANT:  Slatin, Stephen L.
;    APPLICANT:  Von Tersch, Michael A.
;    APPLICANT:  Romano, Charles
;    TITLE OF INVENTION:  NUCLEIC ACID SEGMENTS ENCODING MODIFIED
;    TITLE OF INVENTION:  COLEOPTERAN-TOXIC CRYSTAL PROTEINS
;    NUMBER OF SEQUENCES:  113
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Arnold, White & Durkee
;      STREET:  P.O. Box 4433
;      CITY:  Houston
;      STATE:  Texas
;      COUNTRY:  USA
;      ZIP:  77210
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/427,770
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/993,722
;      FILING DATE:  18-DEC-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Kitchell, Barbara S.
;      REGISTRATION NUMBER:  33,928
;      REFERENCE/DOCKET NUMBER:  MECO:149
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  512/418-3106
;      TELEFAX:  512/474-7577
```

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;  INFORMATION FOR SEQ ID NO:  54:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  652 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-09-427-770-54

  Query Match             99.8%;  Score 3399;  DB 4;  Length 652;
  Best Local Similarity   99.8%;  Pred. No. 2.4e-286;
  Matches  651;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPNSTLEELNYKEFLRMTEDSSTEVLDNS 60

Qy         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSDADPWKAFMAQVEVLIDK 120

Qy        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 KIEEYAKSKALAELQGLQNNFEDYVNALNSWKKTPLSLRSKRSQDRIRELFSQAESHFRN 180

Qy        181 SMPSFAVSKFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240
              |||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SMPSFAVSGFEVLFLPTYAQAANTHLLLLKDAQVFGEEWGYSSEDVAEFYHRQLKLTQQY 240

Qy        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300
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Db        241 TDHCVNWYNVGLNGLRGSTYDAWVKFNRFRREMTLTVLDLIVLFPFYDIRLYSKGVKTEL 300

Qy        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360
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Db        301 TRDIFTDPIFSLNTLQEYGPTFLSIENSIRKPHLFDYLQGIEFHTRLQPGYFGKDSFNYW 360

Qy        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 SGNYVETRPSIGSSKTITSPFYGDKSTEPVQKLSFDGQKVYRTIANTDVAAWPNGKVYLG 420

Qy        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VTKVDFSQYDDQKNETSTQTYDSKRNNGHVSAQDSIDQLPPETTDEPLEKAYSHQLNYAE 480

Qy        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CFLMQDRRGTIPFFTWTHRSVDFFNTIDAEKITQLPVVKAYALSSGASIIEGPGFTGGNL 540

Qy        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 LFLKESSNSIAKFKVTLNSAALLQRYRVRIRYASTTNLRLFVQNSNNDFLVIYINKTMNK 600

Qy        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 DDDLTYQTFDLATTNSNMGFSGDKNELIIGAESFVSNEKIYIDKIEFIPVQL 652


Search completed: February 14, 2005, 15:27:13
Job time : 50 secs
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